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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,928	03/22/2004	Raymond Elijah Barnett	TI-36636	1045
23494	7590	07/17/2008		
TEXAS INSTRUMENTS INCORPORATED				
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EXAMINER				
NEGRON, DANIEL L				
ART UNIT		PAPER NUMBER		
2627				
NOTIFICATION DATE		DELIVERY MODE		
07/17/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/805,928

Applicant(s)

BARNETT ET AL.

Examiner

Daniell L. Negrón

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Request for Continued Examination

1. Examiner acknowledges the request for continued examination (RCE) filed on April 28, 2008.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims rejected under 35 U.S.C. 102(e) as being anticipated by Barnett et al U.S. Patent Application Publication No. 2001/0081339.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Barnett et al disclose a write current circuit for a mass media write head comprising a head write driver adapted to drive the write head with a write current signal having a positive write edge and negative write edge and a circuit coupled with the head write driver circuit and adapted to selectively provide a circuit coupled with the head write driver

circuit and adapted to selectively provide, first pulse signals which independently define overshoot amplitudes of the positive write edge and the negative write edge respectively of the write current signal and second pulsing signals which independently define overshoot duration of the positive write edge and the negative write edge respectively of the write current signal (paragraphs 5, 16, and 20).

Regarding claim 4, Barnett et al disclose a write current circuit wherein the further circuit is adapted to selectively provide a defined amplitude (paragraph 16).

Regarding claim 6, Barnett et al disclose a write current circuit wherein the further circuit includes a delay circuit for selectively providing a defined pulse width for each of the overshoots (paragraph 15).

Regarding claims 8, 10, 12, and 14, claims 8, 10, 12, and 14 have limitations similar to those treated in the above rejections, and are met by the reference as discussed above.

Regarding claims 18 and 19, method claims 18 and 19 are drawn to the method of using the corresponding apparatus claimed in claims 1, 4, and 6. Therefore method claims 18 and 19 correspond to apparatus claims 1, 4, and 6 and are rejected for the same reasons of anticipation as used above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lacombe U.S. Patent No. 6,496,317 in view of Barnett et al U.S. Patent Application Publication No. 2001/0081339.

Regarding claims 1 and 2, Lacombe discloses a write current circuit (Fig. 4) for a mass media write head comprising a head write driver circuit adapted to drive the write head with a write current signal having a positive write edge and a negative write edge (e.g. signals WHX and WHY), and a further circuit coupled with the head write driver circuit and adapted to selectively provide first pulsing signals which independently define overshoot amplitudes of the positive write edge and negative write edge (i.e. signal transitions) respectively of the write current signal, wherein the further circuit is a differential current source (column 7, lines 10-17 and 27-37), but fails to explicitly disclose second pulsing signals which independently define overshoot duration of the positive write edge and the negative write edge respectively of the write current signal.

However, Barnett et al disclose a write current circuit comprising a further circuit for selectively controlling the duration of a write current overshoot (paragraphs 5, 16, and 20) used for the purpose of providing selectable write current. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the write current circuit disclosed by Lacombe with the capability of controlling write current overshoot duration as disclosed by Barnett et al in order to provide a circuit which allows accurate selectable write current which can be customized for optimizing disk drive performance.

Regarding claim 3, Lacombe discloses a write current circuit wherein the differential current source is programmable (column 7, lines 59-65 and column 9, lines 40-43).

Regarding claim 4, Lacombe discloses a write current circuit wherein the further circuit is adapted to selectively provide defined amplitude of each of the overshoot amplitudes (column 9, lines 19-44).

Regarding claim 5, Lacombe discloses a write current circuit wherein the further circuit is programmable for providing differential overshoot amplitudes for the positive write edge and the negative write edge (column 7, lines 59-65 and column 9, lines 40-43).

Regarding claim 6, Lacombe discloses a write current circuit wherein the further circuit includes a delay circuit for selectively providing a defined pulse width (i.e. delay period) for each of the overshoots (column 9, lines 22-25).

Regarding claim 7, Lacombe discloses a write current circuit wherein the delay circuit is programmable for providing differential overshoot pulse widths for the positive write edge and the negative write edge (column 9, lines 52-55).

Regarding claims 8-17, claims 8-17 have limitations similar to those treated in the above rejections of claims 1-7, and are met by the references as discussed above.

Regarding claims 18 and 19, method claims 18 and 19 are drawn to the method of using the corresponding apparatus claimed in claims 1-9. Therefore method claims 18 and 19 correspond to apparatus claims 1-9 and are rejected for the same reasons of obviousness as used above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is (571) 272-7559. The examiner can normally be reached on Monday-Friday (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph H. Feild/
Supervisory Patent Examiner, Art Unit
2627

/D. L. N./
Examiner, Art Unit 2627
July 9, 2008